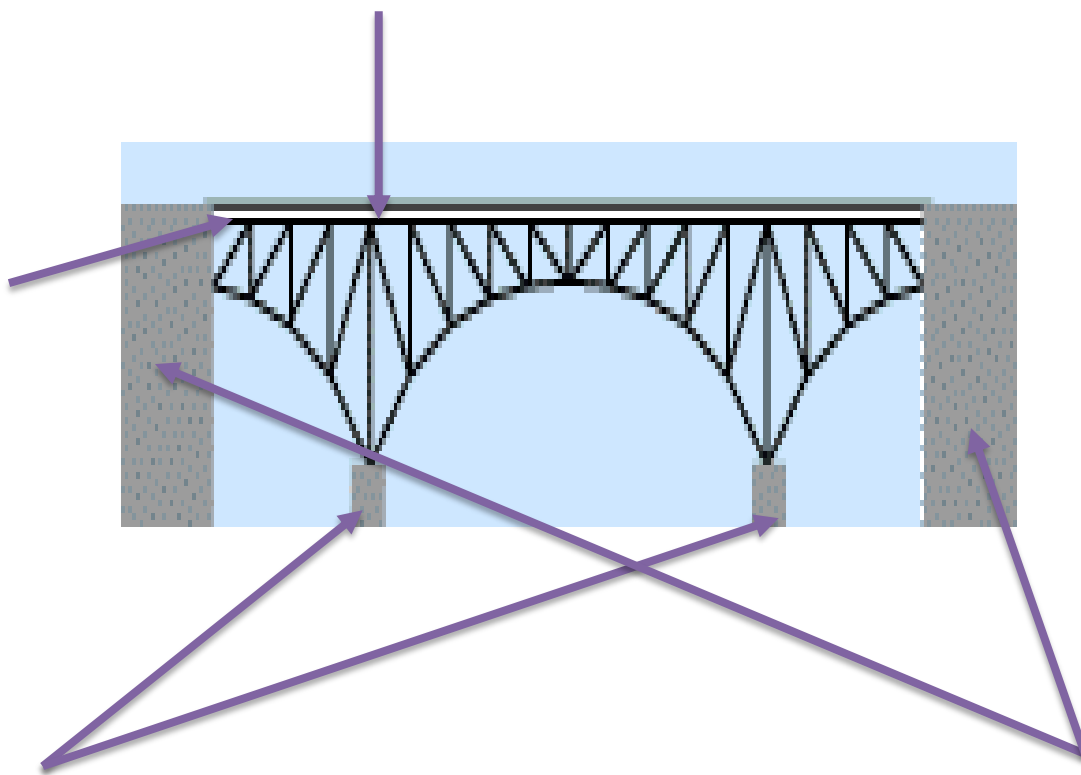


Name _____ Date _____

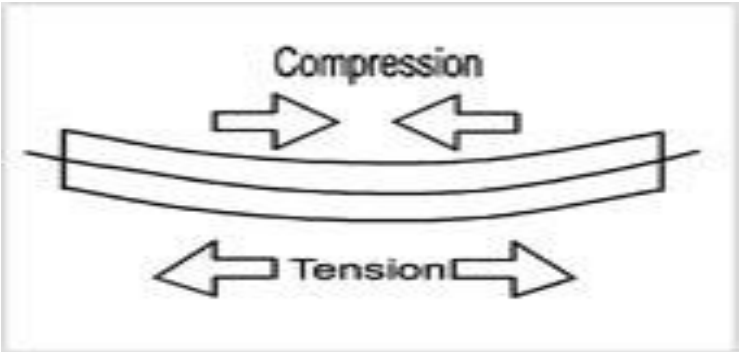
Bridge Basics

Label the image below with the correct terms and definitions



Design 1: Beam Bridge

Describe how weight is distributed on the beam.



What causes Compression on the beam?

What causes tension on the beam?

Fill in 3 Pros and 3 Cons of a Bream bridge below:

Pros	Cons
1.	1.
2.	2.
3.	3.

Design 2: Truss Bridge

How do Truss bridges use triangles to transfer load?

Why is the triangle an excellent shape to use in bridge building?



A Truss bridge's _____ reduces the _____ a bridge must support.

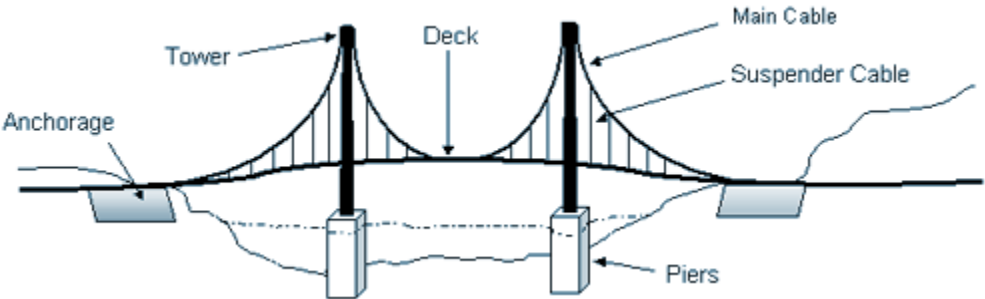
Fill in 2 pros and 2 cons of Truss Bridges below:

Pros	Cons
1.	1.
2.	2.

Design 3: Suspension Bridge

What is the benefit of the towers of a suspension bridge?

Describe weight distribution on a suspension bridge:



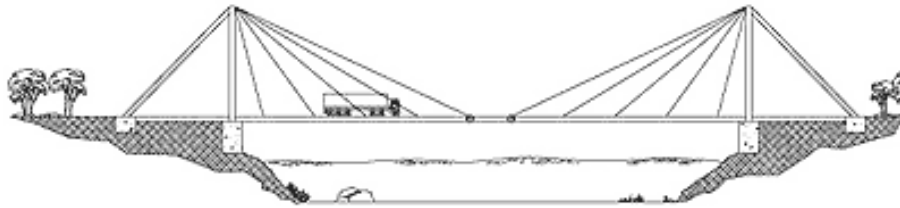
Fill in 3 Pros and 3 Cons of a Suspension bridge below:

Pros	Cons
1.	1.
2.	2.
3.	3.

Design 4: Cable-Stay Bridges

List 5 Characteristics of Cable-Stay Bridges Below:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

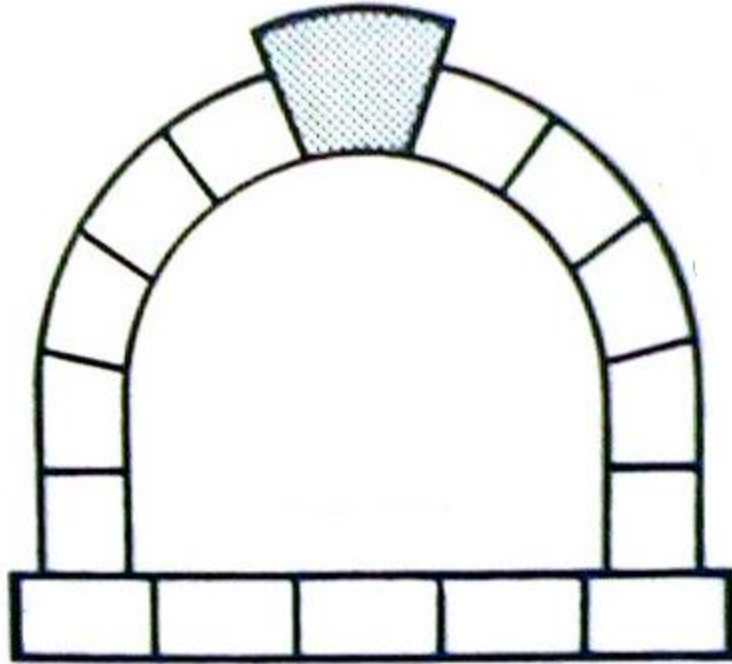


Design 5: Arch Bridges

Fill in 2 pros and 2 cons of Arch Bridges below:

Pros	Cons
1.	1.
2.	2.

Where arch bridges are usually placed? _____



-
- 1) Label the KEYSTONE on the diagram
 - 2) Using a **dotted line** arrow draw in the direction of **load** on the arch bridge
 - 3) Using a **solid line** arrow draw in the direction of **support** on the arch bridge
-

Describe the relationship between action and reaction in an arch bridge.

What are the 7 environmental factors to consider in bridge design?

- 1) _____
 - 2) _____
 - 3) _____
 - 4) _____
 - 5) _____
 - 6) _____
 - 7) _____
-
